	TOP: Patterns and Relations (Patterns, Variables and Equations)								
	KEY:	Conceptual Un	nderstar	nding					
16.	ANS:	В	PTS:	1	DIF:	Moderate	REF:	1.6 Graphing Relations	
	LOC:	7.PR1	TOP:	Patterns and R	elation	s (Patterns)	KEY:	Problem-solving Skills	
17.	ANS:	С	PTS:	1	DIF:	Easy	REF:	1.7 Reading and Writing Equations	
	LOC:	7.PR3 7.PR6 7	.PR7		TOP:	Patterns and R	elation	s (Variables and Equations)	
	KEY:	Conceptual Un	nderstar	nding					
18.	ANS:	В	PTS:	1				1.7 Reading and Writing Equations	
	LOC:	7.PR3 7.PR7			TOP:	Patterns and R	elation	s (Variables and Equations)	
	KEY:	Conceptual Ur	nderstar	nding					
19.	ANS:	D	PTS:	1	DIF:	Easy	REF:	1.7 Reading and Writing Equations	
	LOC:	7.PR3 7.PR6 7	.PR7		TOP:	Patterns and R	elation	s (Variables and Equations)	
		Conceptual Un	nderstar	nding					
20.		-	PTS:	1		Moderate		1.7 Reading and Writing Equations	
		7.PR3 7.PR7			TOP:	Patterns and R	elation	s (Variables and Equations)	
		Conceptual Un		-					
21.	ANS:	-	PTS:	1				1.7 Reading and Writing Equations	
		7.PR3 7.PR7			TOP:	Patterns and R	elation	s (Variables and Equations)	
		Problem-solvi	-						
22.	ANS:		PTS:		DIF:	Easy			
		1.8 Solving Ec						7.PR3 7.PR6 7.PR7	
		Patterns and R			_		KEY:	Conceptual Understanding	
23.	ANS:		PTS:		DIF:	Easy			
		1.8 Solving Ec				• 、		7.PR3 7.PR6 7.PR7	
		Patterns and R					KEY:	Conceptual Understanding	
24.	ANS:	-	PTS:		DIF:	Easy			
		1.8 Solving Ec				• 、		7.PR3 7.PR6 7.PR7	
		Patterns and R			_		KEY:	Conceptual Understanding	
25.	ANS:		PTS:		DIF:	Easy	LOC		
	REF:	1.8 Solving Ec	juations	s Using Algebra	a Tiles		LOC:	7.PR3 7.PR6 7.PR7	

KEY: Procedural Knowledge

TOP: Patterns and Relations (Variables and Equations)

### Unit 2

#### **Multiple Choice**

Identify the choice that best completes the statement or answers the question.

 1.	Let one white tile represent $+1$ and one black tile represent $-1$ . You have 12 black tiles. What tiles do you need to model 0?								
	a. 11 black	b. 12 white	c. 12 black	d. 11 white					
 2.	Let one white tile represent $+1$ and one black tile represent $-1$ . You have 8 white tiles and 6 black tiles. What additional tiles do you need to model $-2$ ?								
	a. 4 white	b. 2 black	c. 4 black	d. 2 white					
 3.	Let one white tile	represent +1 and one bla	ack tile represent –1.						

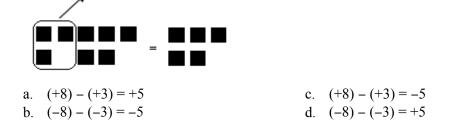
	What is the least number of tiles that you can remove to model $-6$ ?									
	a. 0 black	b. 6 black	c. 6 white	d. 0 white						
 4.	You have 17 white tile	resent +1 and one black t es and 17 black tiles. per of tiles you can remo b. 7 white tiles	-	d. 7 black tiles						
 5.	•	esent +1 and one black t t of tiles model? Write th	<u>^</u>							
		2								
	a. $(-6) + (+2) = -4$ b. $(+6) + (+2) = +6$		c. $(+6) + (-2) = +4$ d. $(+6) + (+2) = +8$							
 6.		resent +1 and one black t l by 8 white tiles and 6 b b. +14	_	d. +2						
7	Add.	0. +14	C2	$\mathbf{u}$ . $\mathbf{u}$						
 7.	$\begin{array}{l} \text{Aut.} \\ (+8) + (-4) \\ \text{a.}  +12 \end{array}$	b4	c. +4	d. –12						
 8.	Use coloured tiles to f	ind the sum.								
	(-8) + (+5) a. $-13$	b. +3	c. +13	d3						
 9.	Use coloured tiles to f	ind the sum.								
	(+8) + (-4) a4	b12	c. +4	d. +12						
 10.	Use coloured tiles to f	ind the sum.								
	(+3) + (+6) + (-4) a9	b. +1	c. +13	d. +5						
 11.	Write an addition equa	ation modelled by the nu	mber line.							
		←────								
	← ↓ ↓ ↓ ↓ ↓ -7 -6 -5 -4 -3 -2	-1 0 1 2 3 4 5	<b>↓ ↓ →</b> 6 7							

a. (+2) + (+3) = +5c. (-3) + (+2) = +5b. (+2) + (-3) = -1d. (+2) + (-3) = +1

12. Use a number line to add.

	(+4) + (+15) a. +11	b. –19	c11	d. +19
 13.	Use a number line to a (+19) + (+11) a. +30	dd. b. +8	c. +23	d. +34
 14.	Use a number line to a $(+4) + (-10)$		1.4	
15	a. +6	b14	c. +14	d6
 15.	Use a number line to a (-10) + (+1) a. +11	ad. b. −11	c. –9	d. +9
 16.	The temperature is 14° Write an addition equa a. $(+14) + (-7) = +7;$ b. $(+7) + (-14) = -7;$	ntion to calculate the fina	al temperature. What is the c. $(+14) + (+7) = +1$ d. $(+7) + (+14) = +2$	0; 10°C
 17.	During the day the ten What was the tempera a. $-10^{\circ}$ C	nperature was -2°C. At r ture at night? b. 6°C	night, the temperature d c6°C	ropped 8°C. d. 10°C
 18.	Let one white tile repr Use tiles to subtract. (+7) - (-5)	esent +1 and one black ti	ile represent –1.	
	a.		c. ■ ■ ■ ■ ■	
	+12 b.		+12 d.	
	- 5 5 - 5 - 5	+	. 5 . 5 5 5 5	+
	+13		+2	

19. Let one black tile represent -1.Write the subtraction equation modelled by this diagram.



 20.	Use tiles to subtract. (+1) – (+13) a. –14	b. +12	c12	d.	+14
 21.	Use tiles to subtract. (+7) - (-2) a. +5	b. –9	c. +9	d.	-5
 22.	Rewrite using addition. (+5) - (-3) a. $(+5) + (-3)$	b. (+3) + (-2)	c. (+5) + (+3)	d.	(+3) + (-5)
 23.	Use a number line to su $(+6) - (+3)$ a.	btract.			
	← + + + + + + + + + + + + + + + + + + +	-4 -3 -2 -1 0 1 2	→ → 3 4 5 6 7 8 9 →	$\rightarrow$	
	← + + + + + + + + + + -9 -8 -7 -6 -5 c.	-4 -3 -2 -1 0 1 2	→ + + + + + + + + + + + + + + + + + + +	$\rightarrow$	
	← + + + + + + + + + + + + + + + + + + +	-4 -3 -2 -1 0 1 2	→ + + + + + + + 3 4 5 6 7 8 9 ← 1	$\rightarrow$	
	<del>&lt; + + + + +</del>	-4 -3 -2 -1 0 1 2	3 4 5 6 7 8 9	$\rightarrow$	
 24.	Subtract. (-22) - (+1) a23	b. +23	c. –21	d.	+21
 25.	Use a number line to ev (+12) + (-3) - (+11) a. $-2$	aluate. b. +4	c. +20	d.	+2

# Unit 2 Answer Section

## **MULTIPLE CHOICE**

1	ANS:	B	PTS: 1		DIE	Fasy	<b>B</b> EE.	2.1 Representing Integers
1.	LOC:		TOP: N			Conceptual Ur		
2.	ANS:		PTS: 1			-		2.1 Representing Integers
	LOC:		TOP: N			Procedural Kn		
3.	ANS:	С	PTS: 1				-	2.1 Representing Integers
	LOC:	7.N6	TOP: N			Procedural Kn		
4.	ANS:	А	PTS: 1		DIF:	Moderate	REF:	2.1 Representing Integers
	LOC:	7.N6	TOP: N	lumber	KEY:	Procedural Kn	owledg	je
5.	ANS:		PTS: 1		DIF:	Easy	REF:	2.2 Adding Integers with Tiles
	LOC:		TOP: N			Conceptual Un		-
6.	ANS:		PTS: 1					2.2 Adding Integers with Tiles
	LOC:		TOP: N			Conceptual Un		
7.	ANS:		PTS: 1					2.2 Adding Integers with Tiles
_	LOC:		TOP: N			Procedural Kn		
8.	ANS:		PTS: 1					2.2 Adding Integers with Tiles
0	LOC:					Procedural Kn	-	
9.	ANS:		PTS: 1	т 1	DIF:	Moderate	REF:	2.2 Adding Integers with Tiles
10	LOC:	/.N6	TOP: N	lumber	KEY:	Procedural Kn	owledg	e 2.2 Adding Integers with Tiles e
10.	ANS:		PIS: I	Turne le cre	DIF:	Difficult	KEF:	2.2 Adding Integers with Tiles
11	LUC:	7.N0	TOP: N	umber	KEY:	Procedural Kn	owledg	e
11.	ANS:	B 2.3 Adding Int	PTS: 1				LOC:	7 N6
		Number					LUC.	7.190
12			PTS: 1	-				
12.		2.3 Adding Int				Wioderate	LOC:	7 N6
		Number				e	200.	
13.	ANS:		PTS: 1			Moderate		
		2.3 Adding Int					LOC:	7.N6
	TOP:	Number				e		
14.	ANS:	D	PTS: 1		DIF:	Moderate		
		2.3 Adding Int					LOC:	7.N6
		Number						
15.	ANS:					Moderate		
		2.3 Adding Int					LOC:	7.N6
				rocedural Kn	U			
16.	ANS:		PTS: 1			Moderate	TOG	
		2.3 Adding Int					LOC:	7.N6
17		Number		roblem-solvir	-			
17.	ANS:		PTS: 1			Moderate	LOC.	7 NG
		2.3 Adding Int Number	•			c	LOC:	/.1NO
10	ANS:	Number	<b>NEY:</b> P PTS: 1	roblem-solvir	-		DEE.	2 1 Subtracting Integers with Tiles
10.	LOC:		TOP: N			Conceptual Ur		2.4 Subtracting Integers with Tiles
	LUC.	/.110	101. 1	unioei	IXL I .	Conceptual Of	incer stal	iuing

19.	ANS: B	PTS:	1	DIF:	Moderate	REF:	2.4 Subtracting Integers with Tiles
	LOC: 7.Ne	TOP:	Number	KEY:	Conceptual Un	ndersta	nding
20.	ANS: C	PTS:	1	DIF:	Moderate	REF:	2.4 Subtracting Integers with Tiles
	LOC: 7.Ne	TOP:	Number	KEY:	Procedural Kn	owledg	ge
21.	ANS: C	PTS:	1	DIF:	Moderate	REF:	2.4 Subtracting Integers with Tiles
	LOC: 7.Ne	TOP:	Number	KEY:	Procedural Kn	owledg	ge
22.	ANS: C	PTS:	1	DIF:	Easy		
	REF: 2.5 S	Subtracting Integ	ers on a Numbe	r Line		LOC:	7.N6
	TOP: Nun	ber KEY:	Conceptual Un	nderstai	nding		
23.	ANS: C	PTS:	1	DIF:	Moderate		
		Subtracting Integ				LOC:	7.N6
	TOP: Nun	ber KEY:	Conceptual Un	nderstai	nding		
24.	ANS: A	PTS:			Moderate		
		Subtracting Integ				LOC:	7.N6
	TOP: Nun	ber KEY:	Procedural Kn	owledg	ge		
25.	ANS: A	PTS:			Difficult		
		Subtracting Integ				LOC:	7.N6
	TOP: Nun	ber KEY:	Procedural Kn	owledg	ge		

# Unit 3

**Multiple Choice** *Identify the choice that best completes the statement or answers the question.* 

 1.	Write $\frac{6}{25}$ as a decimal a. 1.2		0.24	c.	1.8	d.	0.64
 2.	Write $\frac{1}{4}$ as a decimal. a. 0.1	h	0.25	C	$0.\overline{1}$	d	$0.2\overline{7}$
 3.	29	l <b>.</b>	1.86		28.13		3.53
 4.	What is the least numb $\frac{7}{8}, \frac{3}{4}, \frac{2}{3}, \frac{3}{5}$			С.	20.13	u.	5.55
	a. $\frac{7}{8}$	b.	$\frac{3}{4}$	c.	$\frac{2}{3}$	d.	$\frac{3}{5}$
	What is the greatest nu $\frac{3}{4}, \frac{4}{5}, \frac{9}{10}, \frac{7}{10}$	ımbe	er in the set?				
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	b.	$\frac{7}{10}$	c.	$\frac{4}{5}$	d.	$\frac{9}{10}$